

## **REMARKS**

### **INTRODUCTION**

In accordance with the foregoing, claims 1, 5, 6, 8 and 13 have been amended. Claims 3, 7, 10 and 14-24 have been cancelled. Claims 1, 2, 4-6, 8, 9 and 11-13 are pending and under consideration.

### **CLAIM REJECTIONS**

Claims 1-24 were rejected under 35 USC 103(a) as being unpatentable over the Applicant's Admitted Prior Art (hereinafter "AAPA") in view of Omura et al. (US 6,559,894) (hereinafter "Omura").

#### **Claims 1-5 and 8-12**

Amended claims 1 and 8 recite: "...an estimation decision unit deciding the channel estimation values by applying a predetermined threshold value to the cumulated correlation values." Support for these amendments may be found in at least original claims 3 and 10. In the Office Action, Omura is relied on to show this feature of claims 1 and 8. The block adaptive equalization in Omura includes a complex correlator and equalizer estimator section 512 including received waveform complex samples 601, a multiplier 602, a summer 603, a measured channel impulse response 604, a reference segment 605, frame synchronization segments (FSS) 606, and a partial decision feedback segment 607. In Omura, the received waveform samples 601 are correlated with a reference segment 605 using multiplier 602 and summer 603. Further in Omura, reference segment 605 is shifted and multiplied in 602 one bit at a time with the received waveform complex samples 601. These received waveform samples 601 may have distortion caused in part by multipath components. The next step in Omura is to sum the results over the block-time interval in 603 to produce a sequence of complex samples that is the measured channel impulse response 604. However, in contrast to claims 1 and 8, Omura does not discuss an estimation decision unit deciding the channel estimation values by applying a predetermined threshold value to the cumulated correlation values. In Omura, the measured channel impulse response 604 is the sum the results over the block-time interval in 603. In contrast, the estimation decision unit removes unnecessary noises by applying an adaptive threshold algorithm or fixed threshold algorithm to the cumulated correlation values.

Claims 3 and 10 have been cancelled. Claims 2, 4, 5, 9, 11 and 12 depend on one of claims 1 and 8, respectively, and are therefore believed to be allowable for at least the foregoing reasons.

Withdrawal of the foregoing rejection is requested.

**Claims 6, 7, 13 and 14**

Amended claims 6 and 13 recite: "...deciding the channel estimation value by applying a predetermined threshold value to the cumulated correlation values." Support for these amendments may be found in at least original claims 7 and 14. In the Office Action, Omura is relied upon to show this feature of claims 6 and 13. However, Omura does not discuss deciding the channel estimation value by applying a predetermined threshold value to the cumulated correlation values. In Omura, the measured channel impulse response 604 is the sum the results over the block-time interval in 603. This technical feature of claims 6 and 13 removes unnecessary noises by applying an adaptive threshold algorithm or fixed threshold algorithm to the cumulated correlation values.

Claims 7 and 14 have been cancelled. Withdrawal of the foregoing rejection is requested.

**Claims 15-24**

Claims 15-24 have been cancelled.

**CONCLUSION**

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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